Installation and service
instructions, warranty terms
& conditions

DeeGreen

User Guide

Version 1.0

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2. Technical parameters

Printing technology	FDM
Printing area	150 x 150 x 150 mm
Pront accuracy	0,1 mm
Layer thickness	0,1 / 0,15 / 0,2 mm
Nozzle diameter	0,4 mm
Print speed	90 mm / s
Printer control	Touchscreen
Interior lighting	LED
Printable material	PLA, PVA, Wood
Power source	230 V / 120 W
External dimensions	495 x 395 x 390 mm
Weight	20 kg
Inputs	USB, SD card

3. Safety instructions

Warranty void if damaged due to not following the instructions in this User Guide

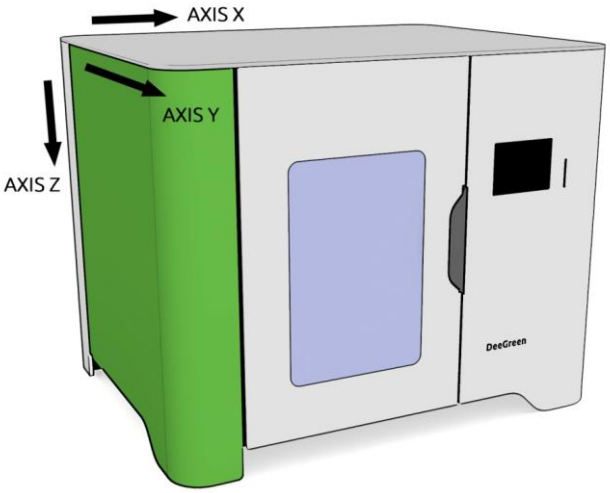
1. Damage caused by improper use, in contradiction with this User Guide or violating the security instructions, are the full responsibility of the user.
2. This device operates at high temperatures, extreme caution must be used.
3. This device is not suitable for children and must be operated by persons over the age of 18, in all other instances the supervision of an adult is required.
4. The device must not be left unattended whilst in operation.
5. Some parts of the printer operate at temperatures greater than 70°C! Danger of burning!
6. Handicapped people who are not able to fully operate the device must have be supervised by a technically qualified person.
7. Make sure the product is complete before using
8. Danger of electric shock if not operated correctly.
9. Disposal of the device must be performed using the correct environmental considerations.
10. Install the printer in a place which is:

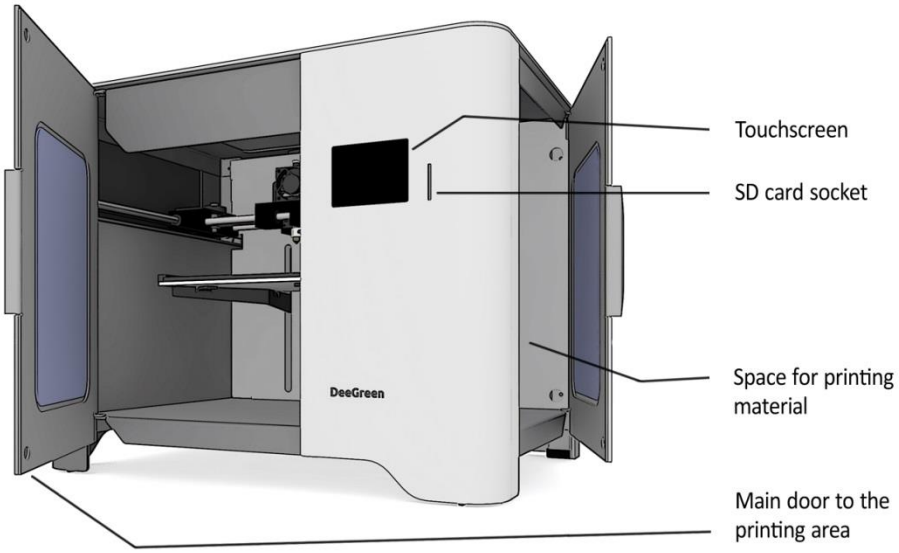
- Dry and free from dust
- A stable environment (temperature, humidity)
- Well ventilated
- Close to an easily accessible electrical supply
- At a sufficient distance from the objects that could cover the ventilation holes of the printer
- At a sufficient distance from objects susceptible to heat (e.g. curtains and drapery), also from splashing liquids and organic gases (e.g. ammonia)
- Out of direct sunlight
- Without abrupt temperature changes
- At a sufficient distance from heating vents, ventilation and air-conditioning systems

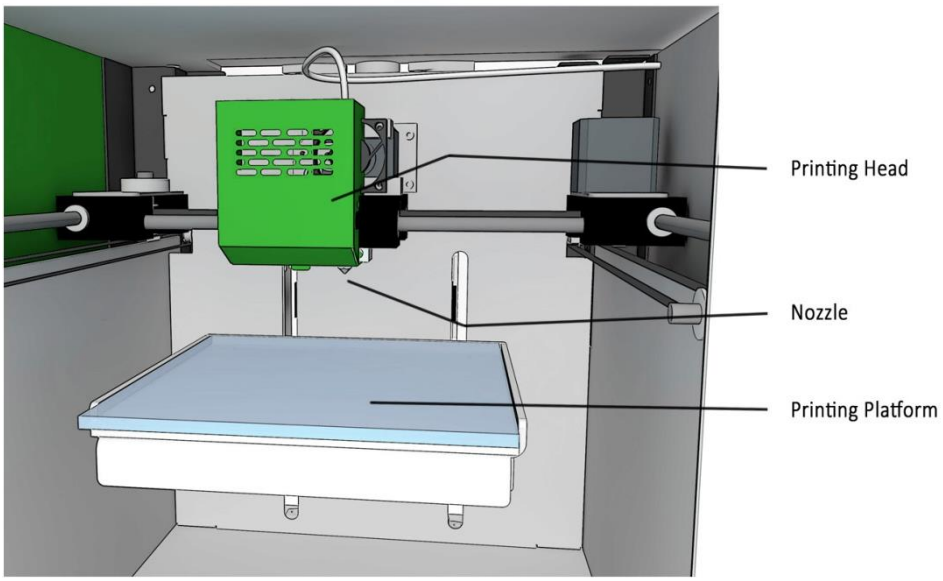
4. Package content

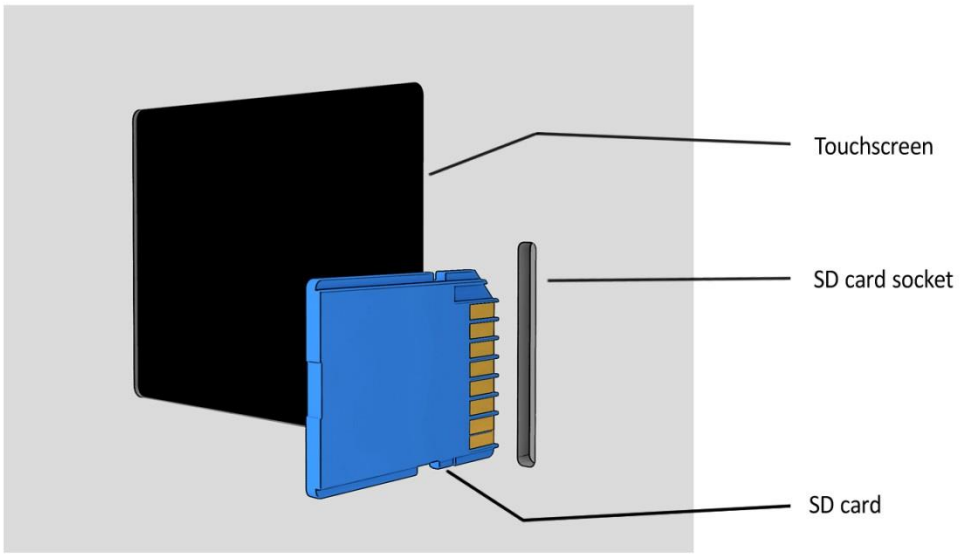
1. 3D printer DeeGreen
2. Power supply 24V/5A
3. USB cable
4. SD card
5. Printing material holder
6. CD with DeeControl software
7. Glue – DeeGlue for printing platform
8. Palette knife for printing platform cleaning and model removal
9. User Guide

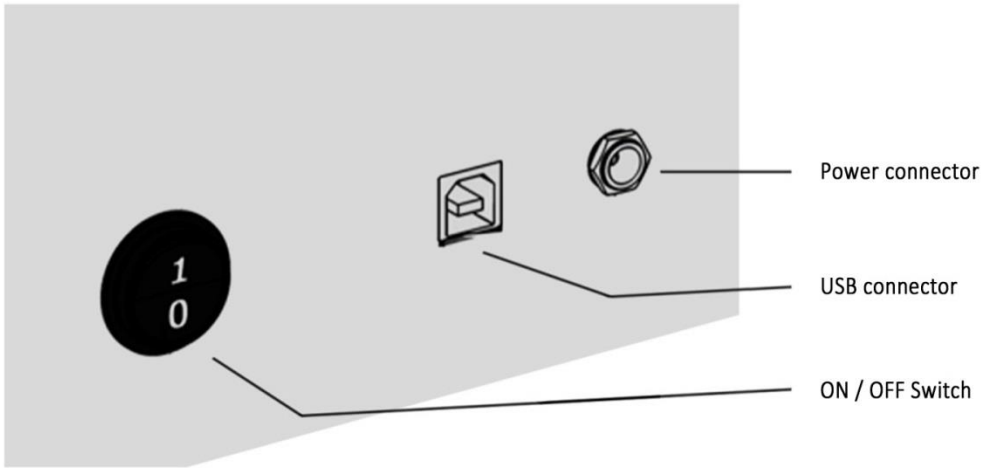
5. Parts description






Printing Head
Nozzle
Printing Platform


Touchscreen
SD card socket
SD card


Power connector
USB connector
1
0
ON / OFF Switch

6. Print instruments

DeeGlue – special stick glue increasing model adherence to print

Palette knife – serves to printed model removal and printing platform cleaning

7. DeeGreen operating requirements

a) Supported Operating Systems:

- Windows 7 or later (DirectX 10+), OpenGL, compatible with Windows XP & Windows Vista
- OS X version 10.7 or later

b) Minimum HW requirements:

- CPU frequency @2.0 GHz
- RAM 2 GB
- 500 MB HDD free space
- USB slot or SD card reader

8. Getting the printer to operate

Prior to the first time use

1. Open the box and take out all accessories; carefully remove all protective parts. Take out the printer.
2. Put the printer onto a solid and flat place, e.g. a desk.
3. Open Main door, grab top cover edge and remove it. Remove the foam protection from printing head.
4. Unpack the printing platform packed among accessories and place it inside the printer on the spikes.
5. Place the printing material holder inside the printer.
6. Install the software provided on the CD following instructions in this User Guide (see #8).
7. Connect the printer to the power supply and the computer via USB cable.
8. Turn on the printer on the rear side (see the picture in chapter 5).

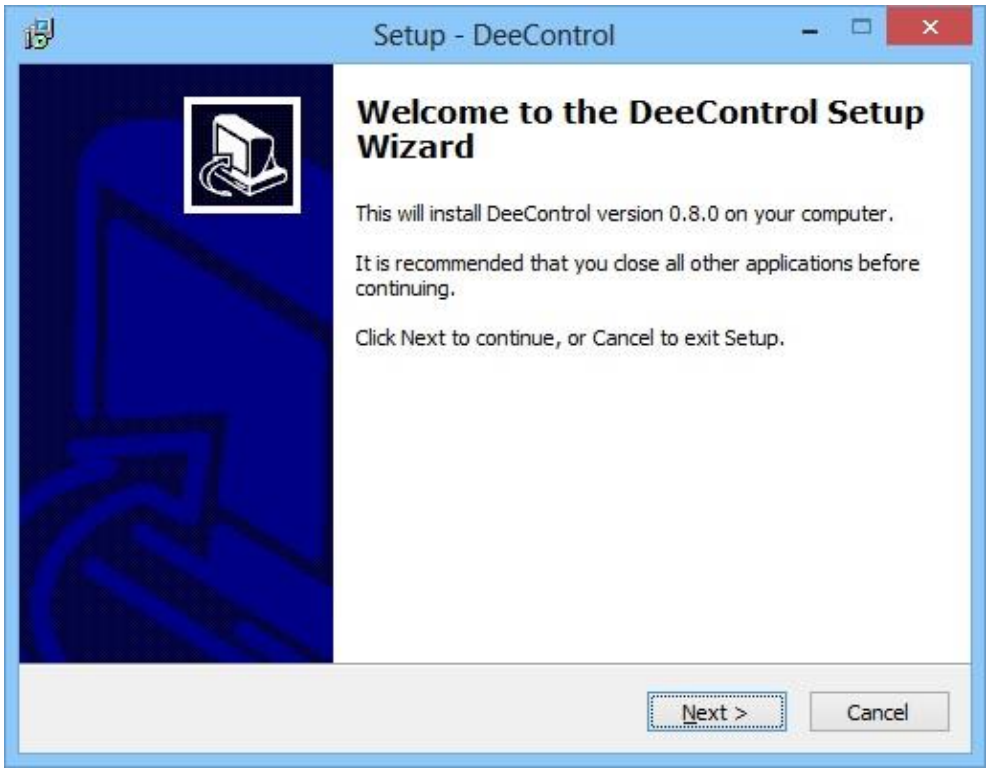
Prior to the first printing.

1. Unpack the printing material spool. Find the string end and cut it 1 cm (0.39”) off the end and then break it. Should you not have the printing material just yet, you can place an order at www.be3D.cz.
2. The printer is designed to work with PLA, PVA a Wood (1,75mm) only! Under no circumstances, **do NOT** use any other material but the recommended ones.
3. Insert the string following the instructions in the chapter 15. Press “Settings” option on the touchscreen and then “String change”.
4. Make sure the glue is applied linearly over the platform.
5. Prepare your digital model in DeeControl software.
6. Follow the instructions either from the display or DeeControl, and start the printing. Automatic platform calibration will be performed prior to the printing.
7. Once the print task is complete, allow a few minutes to printer to cool down between the tasks or before shutting down the printer.
8. Use extra caution when manipulating with the filament spool; put the string end through the spool hole so an unwanted accidental roll back can be avoided.

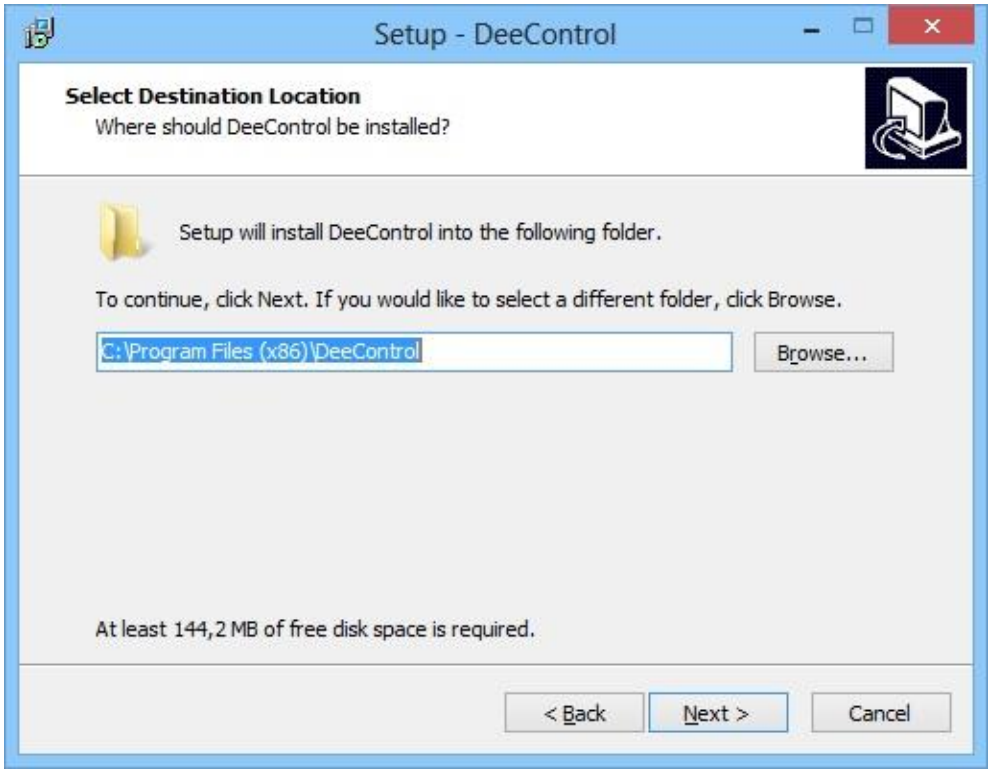
9. DeeControl software installation

DeeControl setup file can be found on the provided CD in deecontrol/setup.exe location.

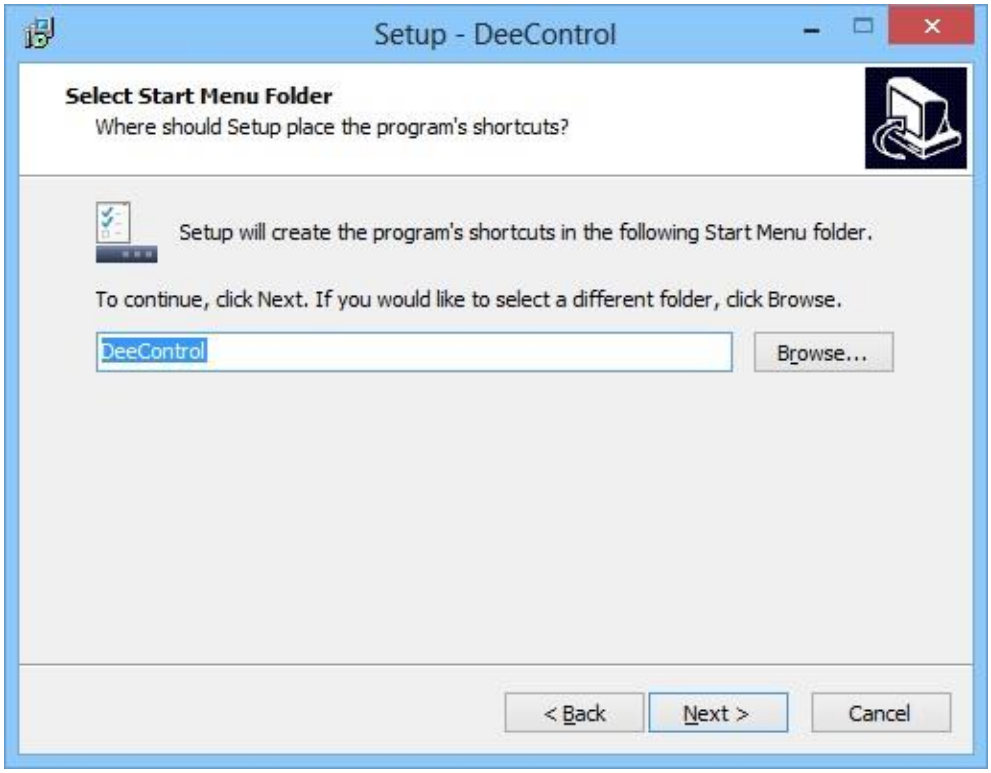
Once launched, the setup wizard will guide you through the installation process.


Setup - DeeControl
Welcome to the DeeControl Setup Wizard
This will install DeeControl version 0.8.0 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

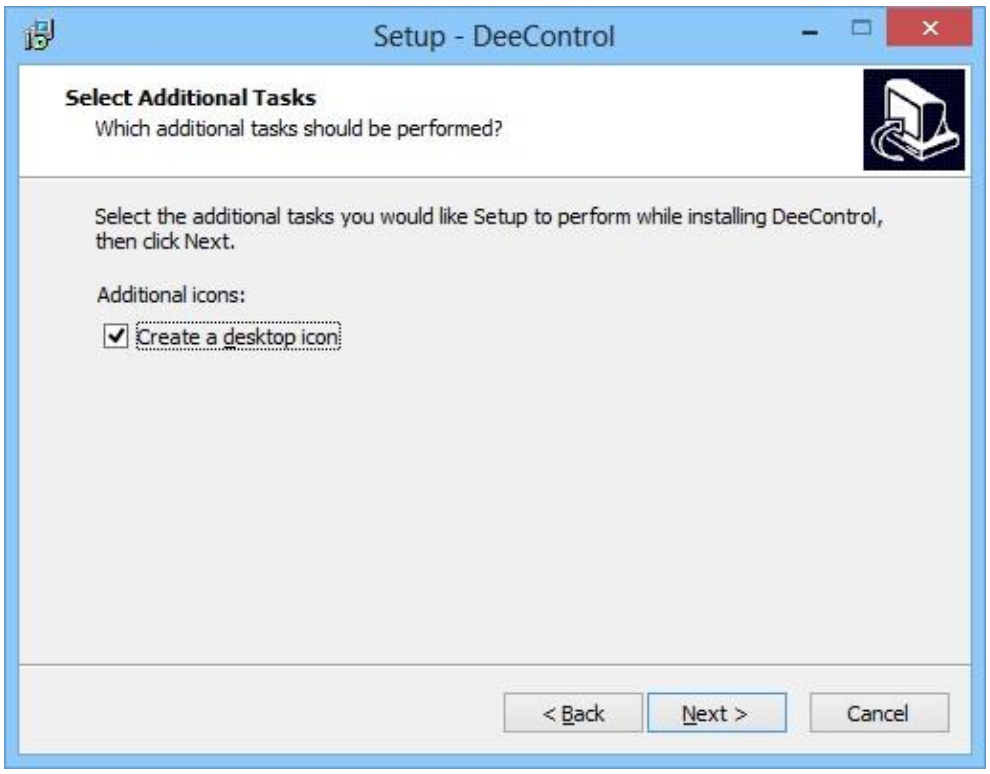
The software version can be checked in the launch window. Click on “Next” to proceed.


Setup - DeeControl
Select Destination Location
Where should DeeControl be installed?
Setup will install DeeControl into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files (x86)\DeeControl
Browse...
At least 144,2 MB of free disk space is required.
< Back
Next >
Cancel

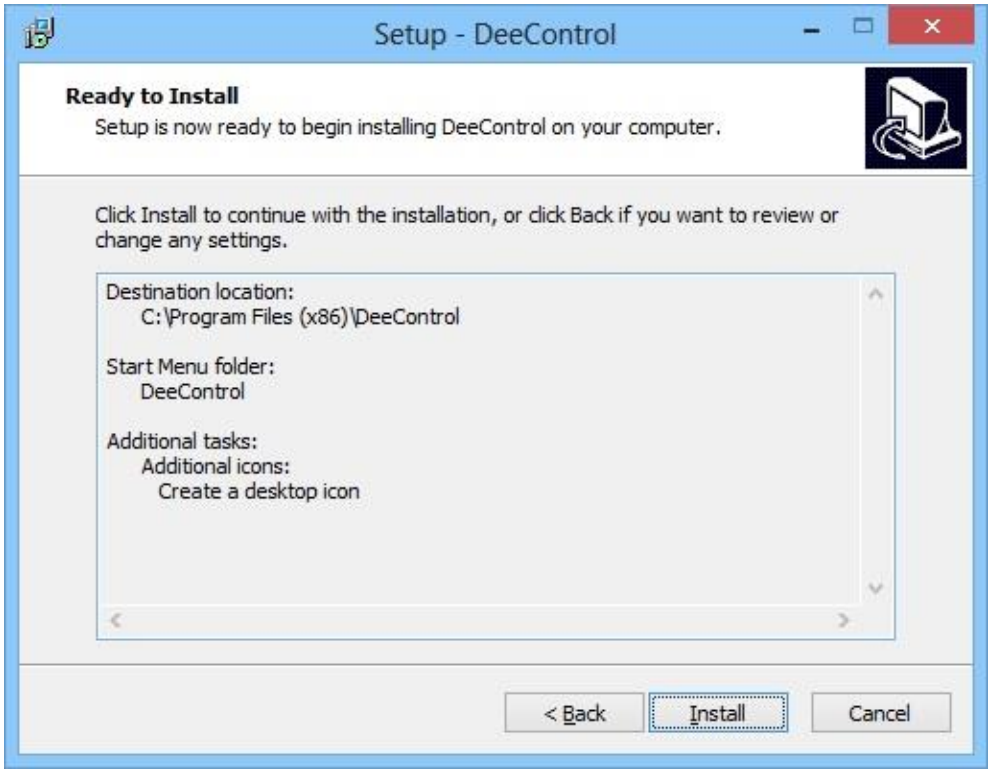
Choose the software location and click on “Next” to proceed.


Setup - DeeControl
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
DeeControl
Browse...
< Back
Next >
Cancel

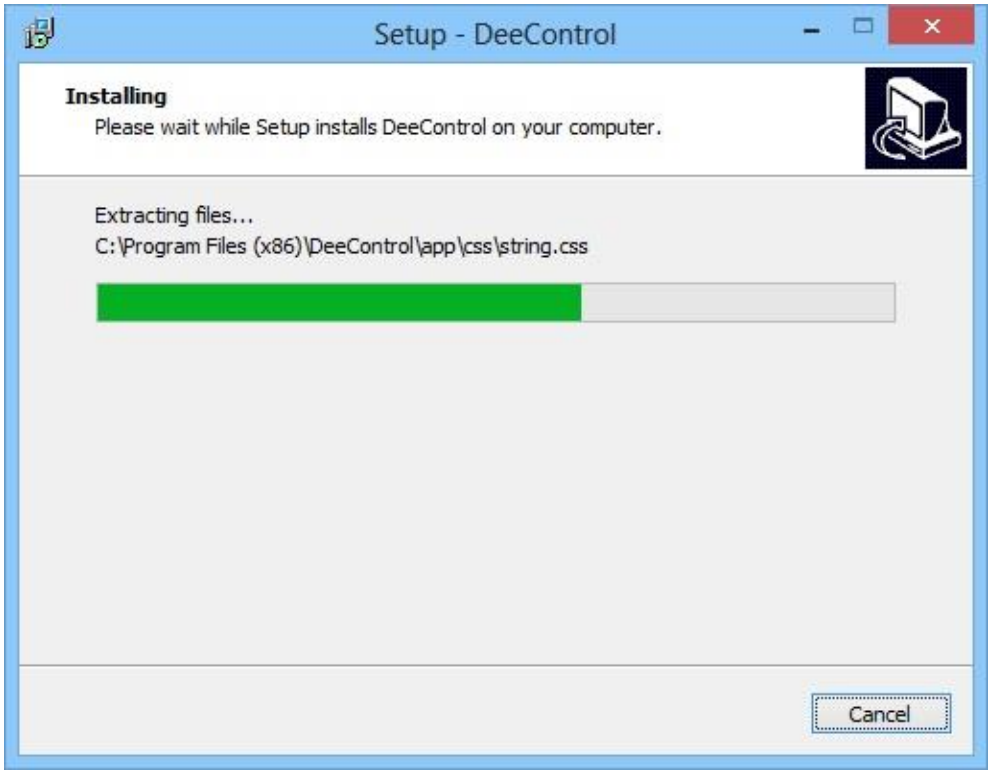
You may change the location name that will be displayed in Start menu. Click on “Next” to proceed.


Setup - DeeControl
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing DeeControl, then click Next.
Additional icons:
Create a desktop icon
< Back
Next >
Cancel

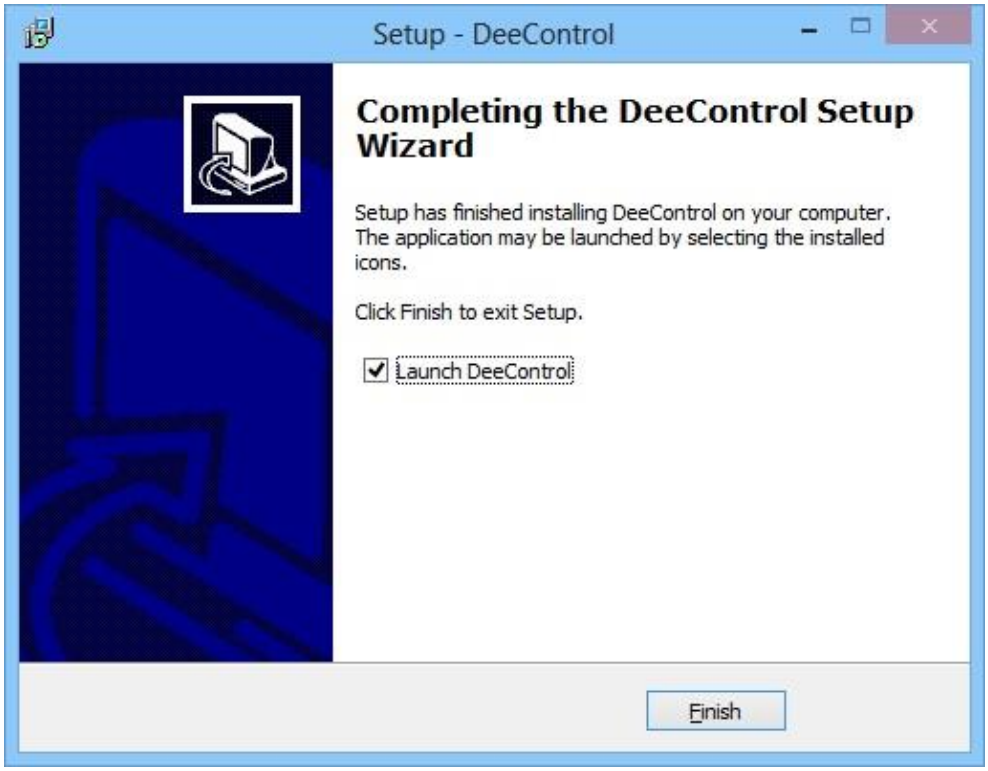
The installation guide can create a desktop shortcut. Click on “Next” to proceed.


Setup - DeeControl
Ready to Install
Setup is now ready to begin installing DeeControl on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Program Files (x86)\DeeControl
Start Menu folder:
DeeControl
Additional tasks:
Additional icons:
Create a desktop icon
< Back
Install
Cancel

You can check the installation configuration here. Click on “Next” to proceed.

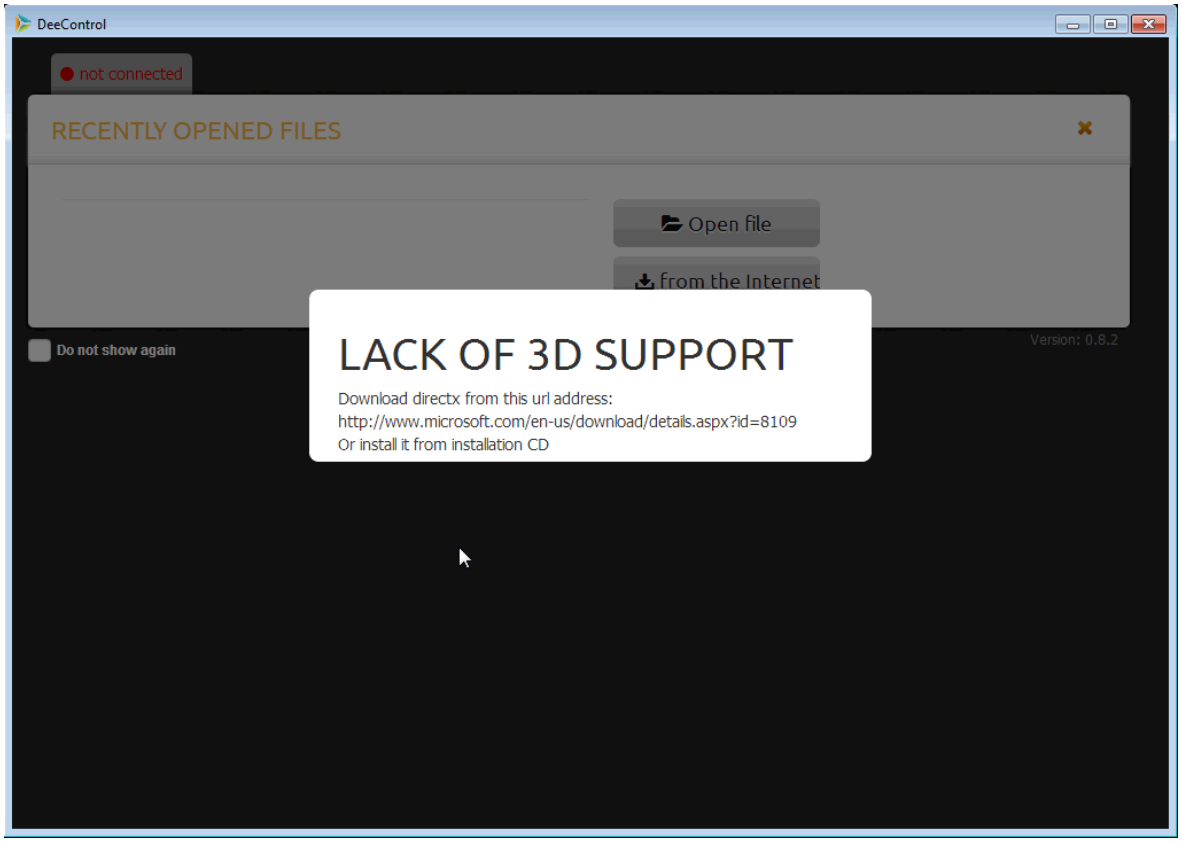


The software is now being installed on your hard drive.


Setup - DeeControl
Completing the DeeControl Setup Wizard
Setup has finished installing DeeControl on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch DeeControl
Finish

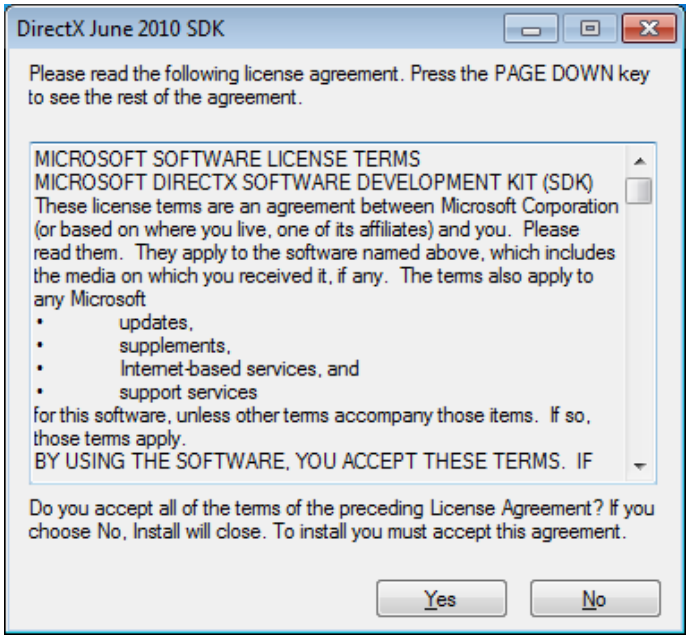
The installation is finished. You may now launch the DeeControl application. Click on “Finish” to close the window.

Possible complications during the first launch:

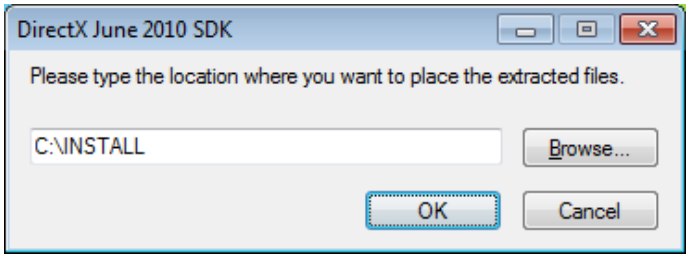


This error will show if there is no DirectX for 3D installed on your computer. Click on the provided link to download the latest version of DirectX, or you can install it from the provided CD.

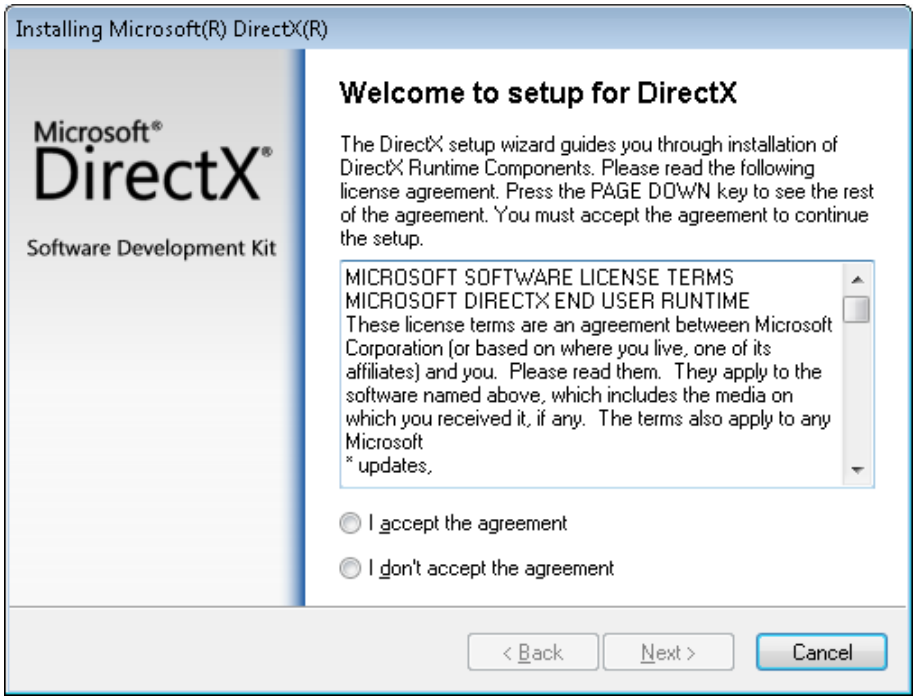
Installation of the software for 3D imaging support:


DirectX June 2010 SDK
Please read the following license agreement. Press the PAGE DOWN key to see the rest of the agreement.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT DIRECTX SOFTWARE DEVELOPMENT KIT (SDK)
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
• updates,
• supplements,
• Internet-based services, and
• support services
for this software, unless other terms accompany those items. If so, those terms apply.
BY USING THE SOFTWARE, YOU ACCEPT THESE TERMS. IF
Do you accept all of the terms of the preceding License Agreement? If you choose No, Install will close. To install you must accept this agreement.
Yes
No

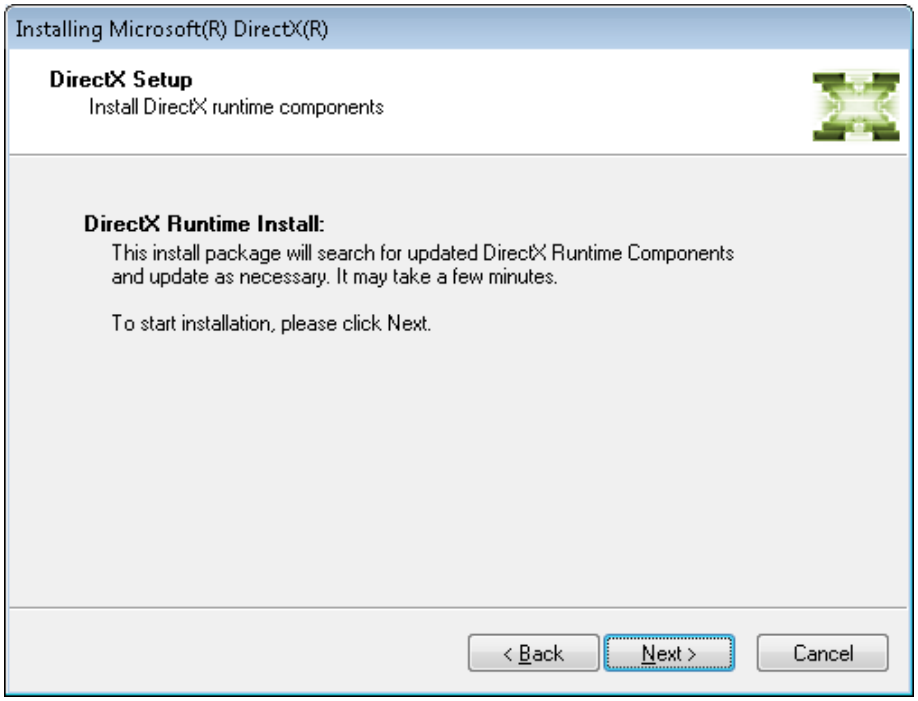
Once read, click on "Yes" to agree with the license agreement.



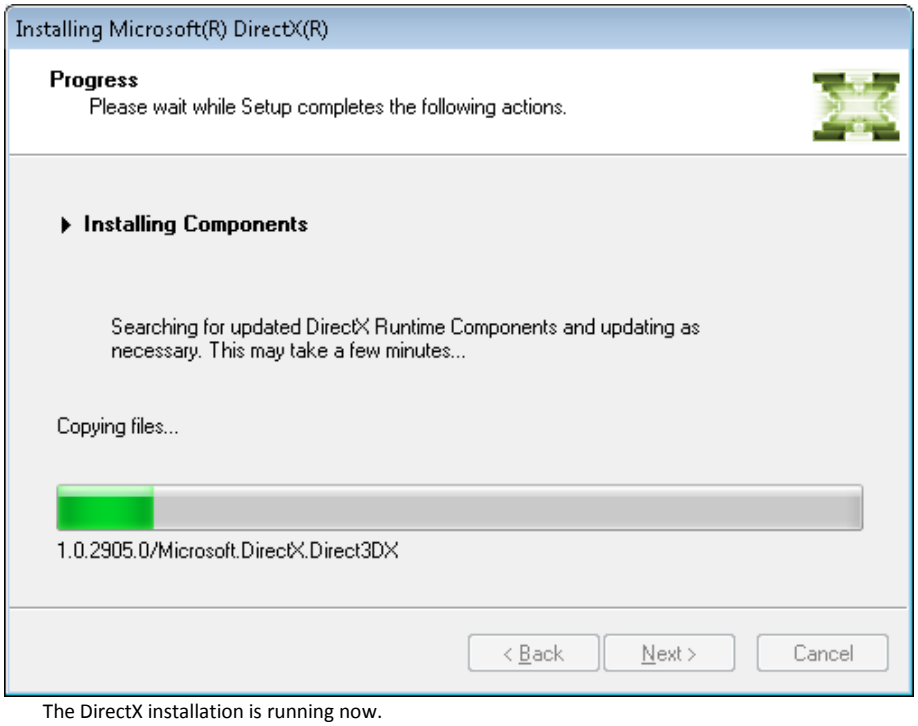
Choose the software destination folder.


Installing Microsoft(R) DirectX(R)
Microsoft®
DirectX®
Software Development Kit
Welcome to setup for DirectX
The DirectX setup wizard guides you through installation of DirectX Runtime Components. Please read the following license agreement. Press the PAGE DOWN key to see the rest of the agreement. You must accept the agreement to continue the setup.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT DIRECTX END USER RUNTIME
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
* updates,
I accept the agreement
I don't accept the agreement
< Back
Next >
Cancel

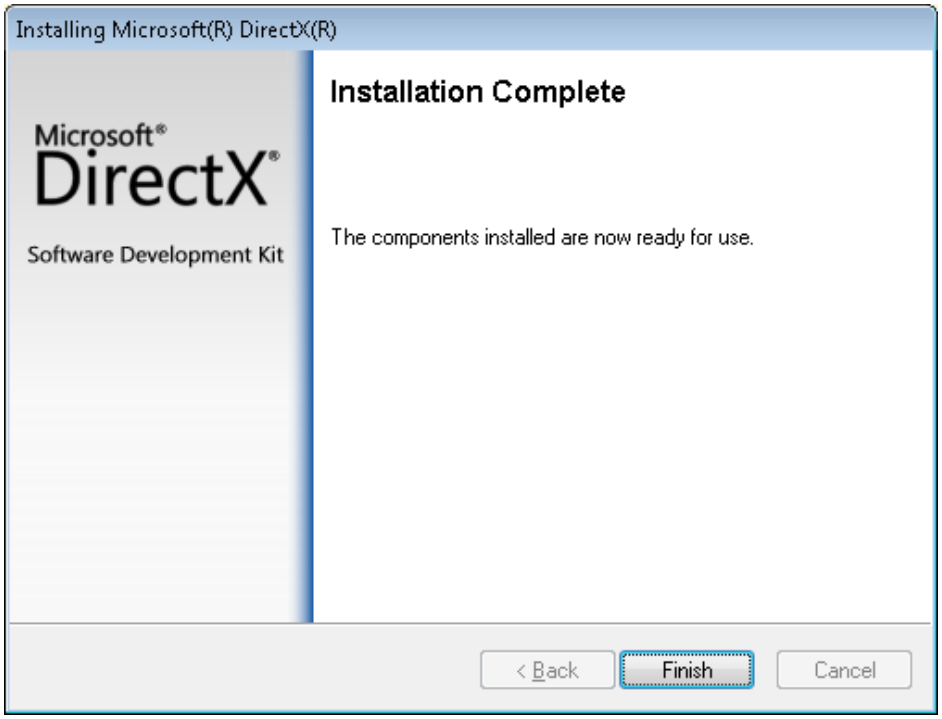
Once read, click on "I agree with the terms and conditions".


Installing Microsoft(R) DirectX(R)
DirectX Setup
Install DirectX runtime components
DirectX Runtime Install:
This install package will search for updated DirectX Runtime Components and update as necessary. It may take a few minutes.
To start installation, please click Next.
< Back
Next >
Cancel

Click on “Next” to run the installation.


Installing Microsoft(R) DirectX(R)
Progress
Please wait while Setup completes the following actions.
Installing Components
Searching for updated DirectX Runtime Components and updating as necessary. This may take a few minutes...
Copying files...
1.0.2905.0/Microsoft.DirectX.Direct3DX
< Back
Next >
Cancel

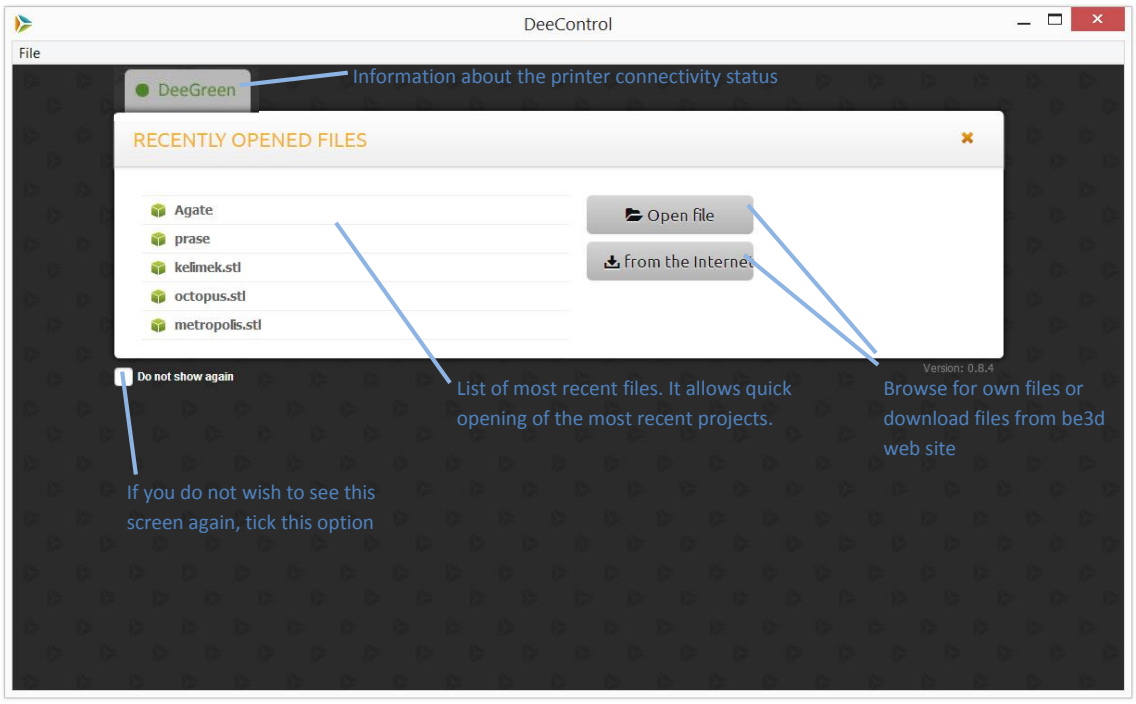
The DirectX installation is running now.



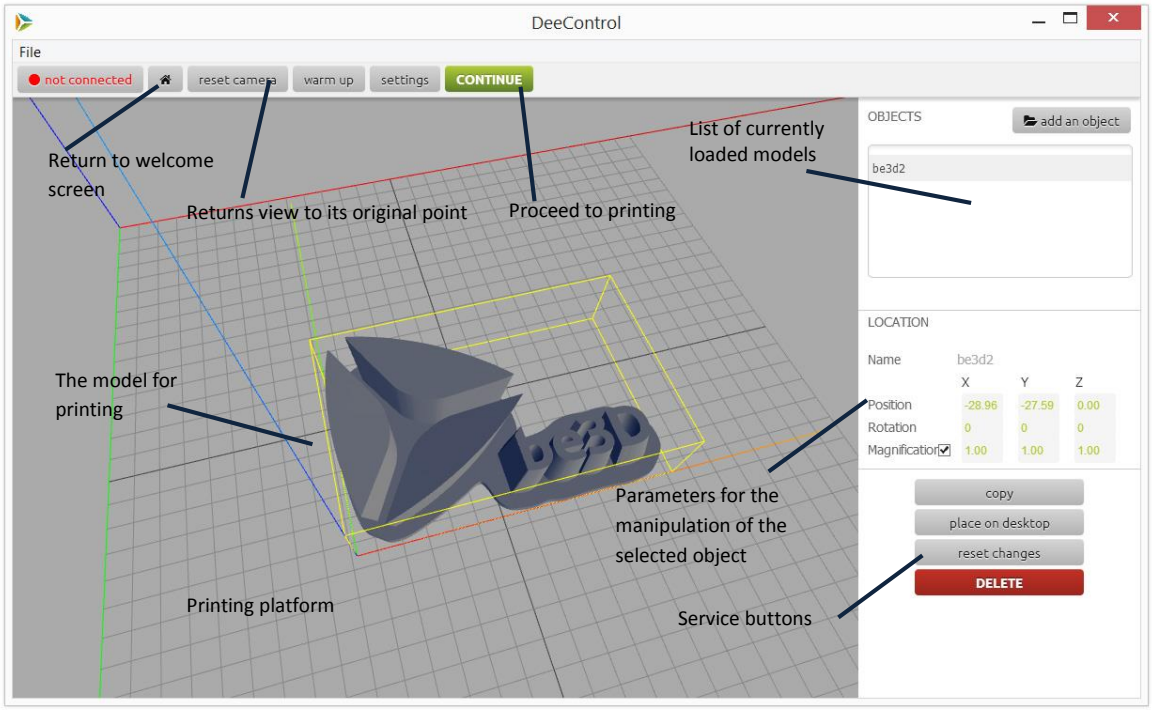
The installation is now complete. Click on “Finish”.

10. DeeControl – operation

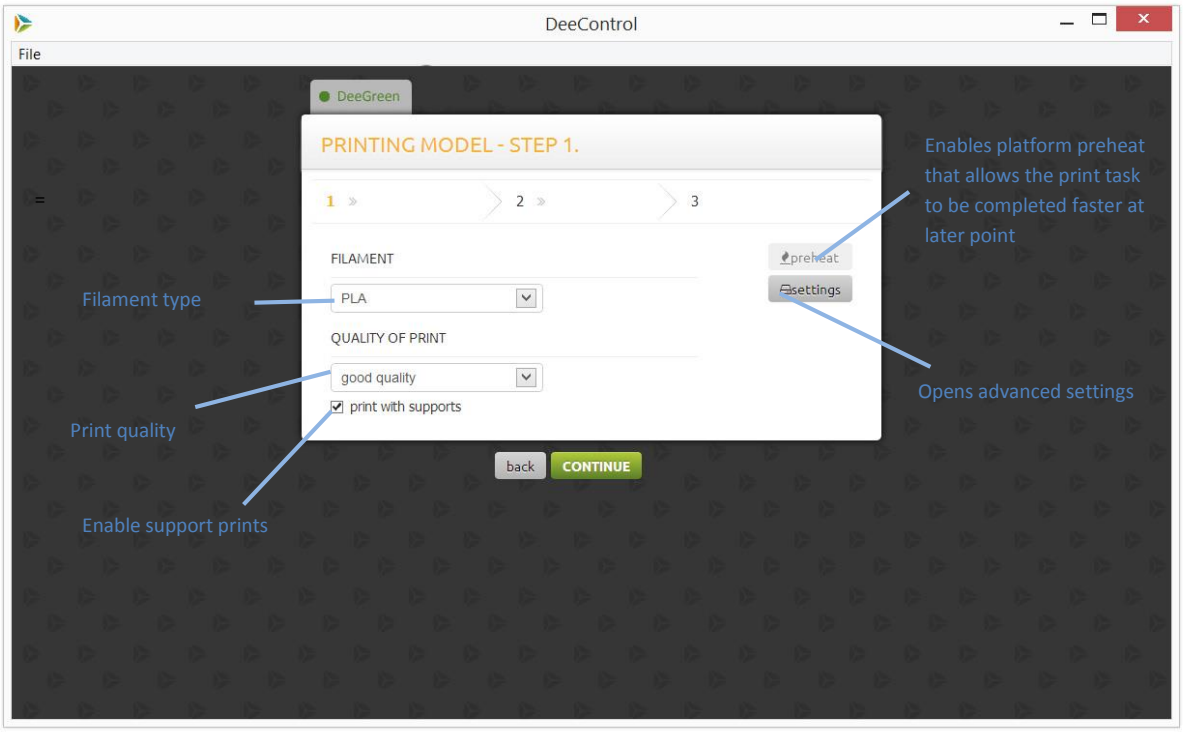
a) Screen description



Welcome screen



Operation screen



Printing screen

b) DeeControl description

DeeControl is a software that allows the model preparation

- DeeControl on MS Windows platforms require DirectX 10.0 or later
- Input data for DeeControl have to be in STL format
- Output DeeControl data are in GCO format
- The printer can print from GCO files saved on SD card in the root directory only
- DeeControl detects printer connected to the computer automatically
- The printer can be disconnected from the computer during the printing process without it being interrupted

c) From launch to printing

On the welcome screen

- Once DeeControl is launched, welcome screen will be displayed
- Check that your printer is turned on and connected to your computer
- You can select the model to be printed either from the most recent list or using the proper buttons

On the preparation screen

- On the preparation screen, you can:
    - Add another model onto the platform using “Add object” button
    - Copy an already added model using “Copy” button
    - Move, scale and turn the object
- All changes can be reversed using “Undo” button, or can be discarded using the “Remove” button.
- Every model must stay on the platform level and must not get underneath it. It can be done so using the “Fix” button
- Before proceeding to the printing task, the model must not hang over the edge
- When ready to print, push the green button to begin the printing

On the printer screen

1. **Step #1**

- Check the filament string type; choose the type the model will be printed with. The printer can use PLA, PVA and Wood filaments only!
- If the settings don’t meet the reality (the filament is not attached to the printer), check the printer is connected to the computer and choose “Change the string” button. If a different filament string is attached, please remove it following the instructions; wait until the string is released, only then you will be able to completely remove it. When putting a new string into the printer, please follow the instructions further in this User Guide
- Select required print quality. The print quality will define the wall thickness of each layer of the printed model (fast print = 0.2 mm, med-quality print = 0.15 mm, high-quality print = 0.1 mm)
- Should your model need supports, please confirm it by ticking this option (a support is auxiliary construction that allows printing of overhanging models e.g. bridges)
- When ready, click on the “Proceed” button

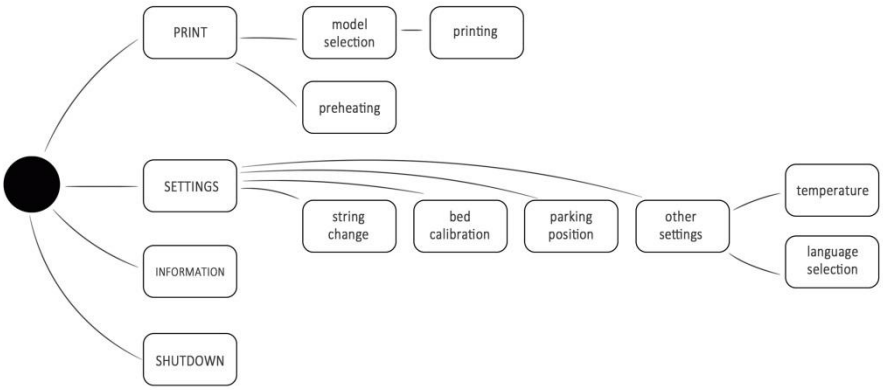
2. **Step #2**

- This step prepares and initiates the print task (if not connected to the computer, the GCO file is to be copied onto SD card)
- When connected to the computer, DeeControl will copy prepared print task to the printer memory and will begin platform heating, its calibration and the print itself, fully automatically

3. **Step #3**

- You will be informed about the current print task status at this stage

11. Printer menu scheme



12. Cleaning and support

- Keep the axis rods oiled (see chapter 14)
- Maintain the print area clean and off the filament remnants. Clean the print area after every print task

13. Filaments and spare parts

Filaments and selected spare parts can be ordered at your supplier or via be3d website.

14. Warranty terms & conditions

DeeGreen 3D printer warranty

Defect product liability law

The law is in accordance with the latest Czech lawsuit regarding product defect responsibility. Quality warranty is not covered by this law. Mechanical parts are covered by the warranty for the term of 24 months since the purchase has been made. This warranty covers any unintended mechanical failures or malfunctions caused by either manufacture procedures or flaws that might have occurred during montage procedure. The warranty does not cover misuse or inappropriate usage, inadequate manipulation, usage and installation in conflict with this User Guide.

Terms & conditions:

- The manufacturer is responsible for proper device and related software functioning, all in accordance with this User Guide
- All malfunctions and flaws caused by manufacturing process or montage are covered by the manufacturer within the limits of the warranty
- A rightful printer owner is eligible for free repair should there be a flaw within manufacture's responsibilities. Flaws shall be fixed within 30 days from the day the flaw was reported

The warranty does not cover malfunctions and/or interruptions caused by:

- Usage of low-quality filaments
- Installation in contradiction with this User Guide, valid laws and norms
- Operation in inappropriate climate conditions
- Inappropriate manipulation

A user is obliged to pay work and departure of technician costs in case of inappropriate reclamation or demand to:

- Fix a flaw caused by a user
- Fix illegally altered printer

- Check and clean the printer
- Repairs caused by power supply blackouts
- Repairs caused during printer start up, installation and/or use of low quality filaments

The warranty is void when:

- The printer construction is altered
- Moving parts and axis maintenance was not conducted in accordance with this User Guide within the 4 months period after the purchase
- The maintenance was not conducted after 200 print-hours
- Instructions stated in this User Guide were ignored
- Other but recommended filaments were used
- Printer electronics were altered
- User/owner has financial commitments to the seller or manufacturer
- The printer was damaged due to inappropriate usage or due to inadequate manipulation during transportation or keeping the printer in wrong climate conditions, esp. inadequate temperature and humidity

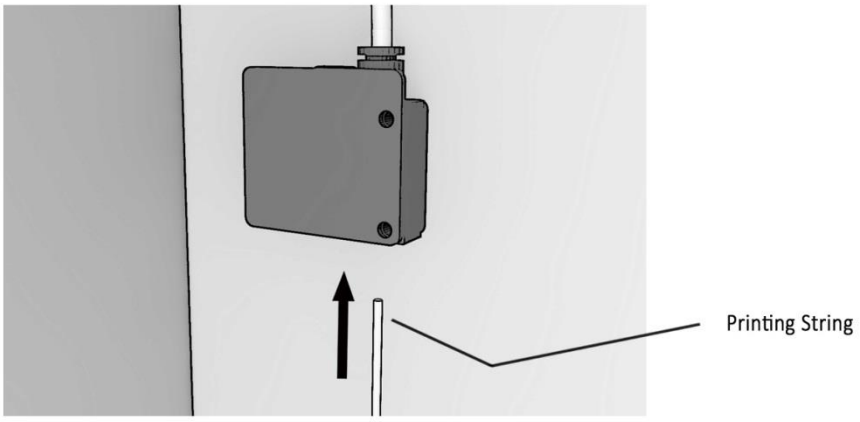
The warranty is void when printer electronics and control units are damaged due to atmospheric events such as thunderstorm, power network overcharge, pollution and damage of mechanical, chemical or heat character as well as repairs, alternations or modifications by unauthorized service centre or user.

15. Authorized service interventions

Authorized service interventions are allowed only when complied exactly with either instructions provided in this part of User Guide or with spare parts, if received:

Placing new filament string

- Release the string following instructions on printer screen
- Remove the released string manually
- Cut off the string end and straighten last 5 cm (1.96”). The string must not be bent
- Put the string to the input hole
- Push the string gently as far as possible until it will not go further. Do not apply pressure or force
- Finish the procedure following instructions on the printer screen until the part when automatic roll is initiated; push the string gently toward the printer
- Visually check if the string is pulled in and complete the guide when the melted filament is released off the nozzle



Moving rods lubrication

- Select “Settings” option in the printer menu and park the printer
- Switch off the printer and disconnect the power supply
- Take down the printer’s top cover. Unscrew all four screws in the rear printer cover. Remove the cover using 3mm L key. Do not touch any electronic or electrical parts nor any cables
- Lubricate the moving rods with a thin layer of oil (low-viscosity oil is recommended)
- Put a thin layer of grease onto the trapezoidal screw (grease resistant to temperatures above 100°C is recommended)
- Once finished, return the rear cover to its original position and secure it with screws. Use extra caution while putting the cover back; pay extra attention to avoid pinching, pull-out or damage of electronics
- Turn the printer on and initiate calibration. Check all axes visually. There must be no extra oil or grease left on the rods. The rods must not make any sound; the only noise you should hear can come from engines

16. Contact details

Manufacturer:

DO-IT, s.r.o.

ID 493 56 593

Contact address:

Pod Hájkem 1,
Prague 8, 180 00
Czech Republic

Invoicing address:

Pod Hájkem 1,
Prague 8, 180 00
Czech Republic

Email: help@be3d.cz

Web: www.be3d.cz

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